

8 S
"LIBRARY"

Final

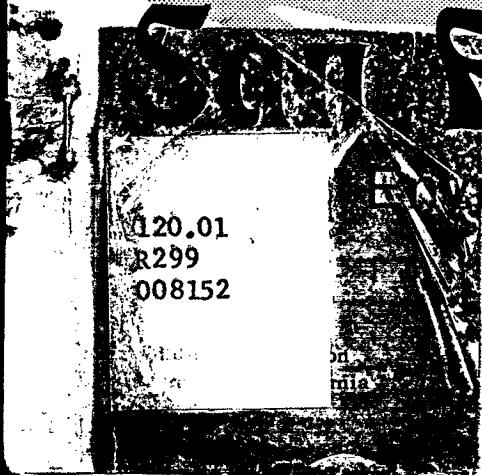


Felipe Division

Environmental Statement

Volume 1

Calif. State Library



UNITED STATES
DEPARTMENT OF THE INTERIOR
Bureau of Reclamation

TABLE OF CONTENTS
VOLUME I

<u>Part</u>	<u>Page</u>
A. DESCRIPTION OF PROPOSAL	A-1
1. Introduction	A-1
2. Purpose of the Division	A-1
3. Plan of Development	A-2
4. Operation	A-8
a. Santa Clara Subarea	A-8
b. Hollister Subarea	A-14
5. Project Water Rights	A-15
6. Actions Required to Implement the Proposal	A-16
7. Previous Studies	A-16
8. Relationship to Other Projects	A-17
B. DESCRIPTION OF EXISTING ENVIRONMENT	B-1
1. Topography	B-1
2. Geology	B-2
a. General	B-2
b. Coordination	B-3
c. Geology at Structures	B-3
(1) Pacheco Tunnel	B-3
(2) Santa Clara Tunnel	B-3
(3) Santa Clara and Hollister Conduits	B-3
(4) San Justo and Coyote Afterbay Dams and Reservoirs	B-4
d. Ground-water Geology	B-5
3. Soils	B-7
4. Mineral Resources	B-9
5. Climate	B-10
6. Air Quality	B-10
a. Air Quality Factors	B-11
b. Air Quality Agencies, Regulations, and Control Strategies	B-19
7. Water Resources	B-22
a. Santa Clara County	B-22
(1) Ground Water	B-22
(2) Surface Water	B-23
(3) Import Water	B-23
(4) Water Quality	B-26
(5) Drainage	B-33
(6) Flooding	B-34
b. San Benito County	B-36
(1) Ground-water	B-36
(2) Surface water	B-37
(3) Water Quality	B-38
(4) Drainage	B-43
(5) Flooding	B-44

<u>Part</u>		<u>Page</u>
B.	DESCRIPTION OF EXISTING ENVIRONMENT (continued)	B-46
8.	Land Use Patterns	B-46
a.	Santa Clara County	B-46
b.	San Benito County	B-50
9.	Native Vegetation	B-53
10.	Fish and Wildlife	B-54
11.	Rare or Endangered Flora	B-59
12.	Rare or Endangered Fauna	B-60
13.	Socioeconomic Aspects	B-61
a.	Santa Clara County Development	B-61
b.	San Benito County Development	B-65
c.	Waste-water Treatment	B-67
14.	Recreation Development	B-69
15.	Archeological and Historical Sites	B-72
C.	ENVIRONMENTAL IMPACTS OF PROPOSED ACTION	C-1
1.	General, Including Impacts During the Construction Period	C-1
2.	Sacramento-San Joaquin Delta	C-3
a.	Introduction	C-3
b.	Climate	C-3
c.	Soils and Vegetation	C-3
d.	Agricultural and Industrial Economy	C-3
e.	Pumping Influence	C-4
f.	Water Quality	C-4
g.	Fish and Wildlife	C-5
h.	Recreation	C-8
3.	Water Resources	C-8
a.	Santa Clara County	C-8
b.	San Benito County	C-13
4.	Future Land Use Patterns	C-16
5.	Air Quality Changes Related to the Project	C-21
6.	Native Vegetation	C-24
7.	Scenic Impacts	C-24
8.	Fish and Wildlife	C-26
9.	Socioeconomic Aspects	C-31
10.	Recreational Development	C-34
11.	Archeological and Historical Sites	C-36
12.	Rare or Endangered Fauna and Flora	C-38
D.	MITIGATION AND PROTECTIVE MEASURES	D-1
1.	During the Construction Period	D-1
2.	Seismicity	D-3
3.	Air and Water Quality Aspects	D-4
4.	Wildlife Habitat	D-6
5.	Scenic Changes	D-6
6.	Archeological and Historical Sites	D-7
7.	Endangered Species of Flora and Fauna	D-8
8.	Fisheries	D-8

<u>Page</u>	<u>Part</u>	<u>Page</u>
B-46	E. UNAVOIDABLE ADVERSE IMPACTS	E-1
B-46	F. THE RELATIONSHIP BETWEEN LOCAL, SHORT-TERM USES OF THE HUMAN ENVIRONMENT AND THE MAINTENANCE AND ENHANCEMENT OF LONG-TERM PRODUCTIVITY	F-1
B-50	1. Short-Term Commitments	F-1
B-53	2. Short-Term Gains in Productivity	F-2
B-54	3. Long-Term Resource Commitments	F-2
B-59	4. Long-Term Gain in Productivity	F-3
B-60	5. The Extent of Foreclosure of Future Options	F-4
B-61		
B-61		
B-65		
B-65		
B-67	G. IRREVERSIBLE AND IRRETRIEVABLE COMMITMENTS OF RESOURCES	G-1
B-69		
B-72		
C-1	H. ALTERNATIVES TO PROPOSED ACTION	H-1
	1. Waste-Water Reclamation Studies	H-1
C-1	a. Waste-Water Reclamation and Reuse, Phase I, Consoer-Bechtel, 1973	H-2
C-3	b. Water Reclamation and Reuse - Report on Public Health Aspects, Phase II, Consoer- Bechtel, October 1973	H-5
C-3	c. Use of Reclaimed Water for Agricultural Irrigation and Conceptual Design, Phase I and Phase II, Consoer-Bechtel, Feb. 1974, May 1974	H-5
C-3	d. Waste-Water Availability and Quality, Phase I - Yoder, Trotter and Orlob (YTO), Jan. 1974 .	H-15
C-4	e. Waste-Water Reclamation and Conveyance Facilities, Phase II - YTO, May 1974 . . .	H-15
C-4	f. Feasibility of Using Reclaimed Water from the Santa Cruz-Watsonville Area for the Hollister and South Santa Clara Subareas, Phase III - YTO, November 1974	H-15
C-5	g. Summary	H-16
C-8	2. Local Conservation Plans for Santa Clara County .	H-17
C-8	a. Reservoir Storage Plans	H-17
C-8	b. Water Conservation Measures	H-20
C-13	c. Summary	H-21
C-16	3. Alternative Canal and Tunnel Routes	H-22
C-21	4. No-Action Alternative	H-23
C-24		
C-24		
C-26		
C-31		
C-34		
C-36		
C-38		
D-1	I. CONSULTATION AND COORDINATION	I-1
D-1	1. Consultation and Coordination During Development of the Proposal and During Preparation of the Environmental Impact Statement	I-1
D-3	2. References	I-2
D-4		
D-6		
D-6		
D-7		
D-8		
D-8		

L I S T O F T A B L E S

<u>Table</u>	<u>Page</u>	<u>Plat</u>
A-1 Project Facilities	A-9	A-1
A-2 Project Water Deliveries	A-10	A-2
A-3 Project Diversions - Percent of Total	A-11	A-3
A-4 Projected Diversion Schedule	A-12	A-4
A-5 Comparison of Project Facilities, 1975-1967	A-18	B-1
B-1 Ambient Air Quality Standards	B-12	B-2
B-2 Airshed Emissions, 1972	B-14	B-2
B-3 Emissions by County - 1975	B-15	B-3
B-4 Average Annual Pollutant Concentrations for San Jose 1969-1973	B-17	B-3
B-5 Number of Days Standards Exceeded for Selected Pollutants at San Jose, 1969-1973	B-18	B-4
B-6 Average Streamflows - San Felipe Division	B-24	B-5
B-7 Principal Existing Storage and Regulating Facilities	B-25	B-5
B-8 Annual Water Supply and Water Disposal, Santa Clara Valley Ground-water Basin	B-27	B-6
B-9 Surface Water Quality, Santa Clara County	B-28	B-6
B-10 Water Quality Characteristics of Coyote Creek near Madrone	B-29	C-
B-11 Surface Water Quality in Pajaro River Basin	B-30	C-
B-12 Summary of Ground-water Quality Characteristics in Santa Clara Subarea	B-31	C-
B-13 Ground-water Quality, Santa Clara County	B-32	H-
B-14 Water Quality - Hollister Subarea	B-39	A
B-15 Typical Ground-water Quality in the Pajaro River Basin	B-40	
B-16 Partial Chemical Analyses of Water from Wells in the Northern Half of Hollister Valley	B-41	
B-17 Santa Clara County Wildlife Habitat	B-54	
B-18 Ethnic Distribution of the Labor Force by Occupation, Santa Clara County, 1970	B-64	
B-19 Present Recreation Facilities, Santa Clara County . .	B-70	
C-1 Project Water Quality With and Without Peripheral Canal	C-10	
C-2 Comparison of Population Projections for Santa Clara County (1000)	C-17	
C-3 Weekday Trip Distributions, Santa Clara County (1000)	C-23	
H-1 Waste-water Production from San Jose-Santa Clara Treatment Plants, Santa Clara and Hollister Subareas Irrigation Water Requirements	H-8	
H-2 Sewage Quality Santa Clara County	H-12	
H-3 Dam and Reservoir Investigations in Santa Clara County	H-19	

L I S T O F P L A T E S

<u>Page</u>	<u>Plate</u>	<u>Follows page</u>
A-9		
A-10	A-1 Comprehensive Plan	A-2
A-11	A-2 Plan of Development	A-2
A-12	A-3 Project Facilities	A-16
A-18	A-4 Construction Schedule	A-16
B-12	B-1 Central Valley Project - San Felipe Division, California - Major Active Faults	B-2
B-14	B-2 Land Subsidence from 1934 to 1967, Santa Clara Valley, California	B-6
B-15	B-3 Land Subsidence from 1960 to 1967, Santa Clara Valley, California	B-6
B-17	B-4 Hollister Subarea - Soil Associations	B-8
B-18	B-5 Pollutant Trends, San Francisco Bay Area Air Basin . .	B-16
B-24	B-6 Water Facilities and Distribution	B-22
B-25	B-7 Location of Ground-water Wells, Santa Clara County . .	B-34
	B-8 Hollister Subarea Generalized Ground-water Depth Spring 1969	B-38
B-27	B-9 Hollister Subarea Boron Concentration in Groundwater	B-42
B-28	C-1 Trends in Air Pollutant Emissions, 1955-1970	C-22
B-29	C-2 Tunnel Disposal Sites	C-26
B-30	C-3 Archeological Zones of Sensitivity	C-36
B-31	H-1 Supply - Demand Curve	H-10
B-32		
B-39		

A P P E N D I C E S

B-40		
B-41	<u>Appendix</u>	
B-54	I Existing Environment in the Sacramento-San Joaquin Delta	I-1
B-64		
B-70	II List of Plants and Animals Known to Occur in and Adjacent to the San Felipe Division	II-1
C-10		
C-17	III Memorandum on Phase II of Waste-water Reclamation and Reuse Study	III-1
C-23		
H-8	IV Letter from the Staff of the State Historic Preservation Officer	IV-1
H-12		
H-19	V Sample Contract Specification for Environmental Quality Protection During Construction	V-1